United Nations A/72/151

General Assembly

Distr.: General
17 July 2017

Original: English

Seventy-second session
Item 134 of the provisional agenda*
Financial reports and audited financial statements, and reports of the Board of Auditors

First annual progress report of the Board of Auditors on the implementation of the information and communications technology strategy

Note by the Secretary-General

The Secretary-General has the honour to transmit herewith to the General Assembly a letter dated 30 June 2017 from the Chair of the Board of Auditors together with the report of the Board on progress in the implementation of the information and communications technology strategy.

* A/72/150.

17-11985 (E) 150817

Please recycle

Contents

		Page
	Letter of transmittal	3
	Information and communications technology: key facts	4
	First annual progress report of the Board of Auditors on the implementation of the information and communications technology strategy for the United Nations	5
	Summary	5
I.	Background	10
II.	Mandate, scope and methodology	10
III.	Findings and recommendations	10
	A. Follow-up to previous recommendations of the Board of Auditors	10
	B. Governance and leadership	11
	C. Modernization activities	17
	D. Transformation activities	19
	E. Innovation	22
	F. Optimal use of information and communications technology resources	23
IV.	Acknowledgements	26
Annexes		
	Annex I: Status of implementation of the recommendations on information and communications technology affairs	27
	Annex II: Original strategic road map	38
	Annex III: Information and communications technology policies pending finalization and revision: 2017 road map	39
	Annex IV: Status of application rationalization	41
	Annex V: Results of the survey on the implementation of the information and communications technology strategy	43

Letter of transmittal

Letter dated 30 June 2017 from the Chair of the Board of Auditors addressed to the President of the General Assembly

I have the honour to transmit to you herewith the first report of the Board of Auditors on the implementation of the information and communications technology strategy for the United Nations.

(*Signed*) Shashi Kant **Sharma**
Comptroller and Auditor General of India
Chair of the Board of Auditors
(Lead Auditor)

Information and communications technology: key facts

Budget and resources

$1,372.8 million	Information and communications technology (ICT) resources, excluding Umoja, for the biennium 2016-2017
67.95 per cent	Estimated percentage of the annualized ICT budget relating to peacekeeping operations (2016/17)
4,645	Estimated total ICT workforce
1,652	Number of applications in use across the United Nations, down from 2,340 in 2014
594	Number of locations in which ICT is used

Timeline

October 2014	The Secretary-General submitted the ICT strategy (A/69/517)
December 2014	The General Assembly adopted resolution 69/262, in which it endorsed the ICT strategy
September 2015	The Secretary-General submitted his first report on the status of implementation of the ICT strategy for the United Nations (A/70/364 and Corr.1)
December 2015	The Board of Auditors submitted its report on progress in the handling of ICT affairs in the Secretariat (A/70/581)
February 2016	The Advisory Committee on Administrative and Budgetary Questions submitted its report on progress in the handling of ICT affairs in the Secretariat (A/70/755) and recommended that the Board of Auditors submit an annual progress report during the five-year implementation period of the ICT strategy
April 2016	The General Assembly adopted resolution 70/238 B, in which it endorsed the conclusions and recommendations contained in the report of the Advisory Committee (A/70/755)
September 2016	The Secretary-General submitted his second report on the status of implementation of the ICT strategy for the United Nations (A/71/400)

Strategy

20	Number of strategic projects underpinning the strategy being reported on by the Office of Information and Communications Technology in document A/71/400. Of 20 projects, 7 have been reported as completed
2014-2020	The five-year time frame of 2013-2017 indicated in the strategic road map (A/69/517, annex I) has been revised to 2014-2020, in line with the Secretary-General's second report on the status of implementation of the ICT strategy for the United Nations (A/71/400)

First annual progress report of the Board of Auditors on the implementation of the information and communications technology strategy for the United Nations

Summary

Introduction

In 2014, at its sixty-ninth session, the General Assembly adopted resolution 69/262, in which it endorsed the information and communications technology (ICT) strategy for the United Nations proposed in the report of the Secretary-General (A/69/517). The idea behind the strategy is to create a unified global provision of ICT to enable the successful delivery of the United Nations' mandate. It is aimed at aligning all ICT activities with the United Nations' goals and it has identified three objectives to that end: (a) the direction of ICT in support of organizational priorities, such as Umoja; (b) the harmonization of existing infrastructure and processes; and (c) greater emphasis on innovation to support the substantive work of the United Nations. To achieve those objectives, the strategy focuses on five major areas, known as key drivers, namely, modernization in support of organizational priorities, transformation of ICT delivery, innovation to foster new technological solutions in the long term, strengthened governance and leadership framework, and optimal use of ICT resources.

The Secretary-General submitted his first report on the status of implementation of the strategy (A/70/364 and Corr.1) in September 2015 and his second report (A/71/400) in September 2016. The Board of Auditors submitted its report on progress in the handling of ICT affairs in the Secretariat to the General Assembly in December 2015 (A/70/581). After consideration of that report, the Advisory Committee on Administrative and Budgetary Questions recommended to the Assembly that the Board submit an annual progress report during the five-year implementation period of the strategy, and the Assembly endorsed that recommendation in resolution 70/238 B. The present report is the first report submitted in compliance with that resolution and it provides an examination of the implementation of the strategy during the years 2015 and 2016.

Key findings

The Board's key findings are presented below.

Governance framework and accountability

The Chief Information Technology Officer has been assigned the responsibility for the overall direction, coordination and implementation of the strategy. However, it is only in September 2016, that is almost two years after the commencement of the five-year strategy, that the Secretary-General's bulletin defining the organization of the Office of Information and Communications Technology and its roles and functions, including that of the Chief Information Technology Officer, was issued (ST/SGB/2016/11). As of February 2017, the delegation of authority and designation of staff members performing significant functions in the Office of Information and Communications Technology had yet to be issued.

Although departments and offices across the Secretariat have a crucial role in ensuring the implementation of the strategy, their accountability framework is

diffused. The provisions in the senior managers' compact[1] with regard to the implementation of the strategy are very subjective and generic in nature and they have not facilitated an objective assessment of their performance in implementing the strategy, leading to a lack of accountability. Meanwhile, departments continue to run their own ICT units and are yet to align their business plans with the strategy.

The mandate for and responsibility of monitoring and ensuring the implementation of the strategy across the Secretariat lie with the governance framework and the Office of Information and Communications Technology. However, a comprehensive system for periodic reporting on progress in implementing various elements of the strategy by all the departments and offices to the Office of Information and Communications Technology is yet to be put in place. This step is essential for the centralized monitoring of project performance, compliance with ICT policies, the optimization of ICT resources, achieving the overall objectives of the strategy and keeping the governance framework informed of progress.

Project implementation

The Board noted that, even when taking into account the revised timelines provided in the first report on the status of implementation of the strategy, six projects had been delayed beyond their expected completion dates. Moreover, three projects expected to be completed by March 2017 had achieved only a 65 to 70 per cent completion rate.

Monitoring of strategic projects

Project monitoring involves continuous tracking of physical and financial progress to control time and cost overruns and execute the project in an economic, efficient and effective manner. However, the Board observed that, while the project timelines and the physical progress achieved in terms of percentage completion had been presented in both reports on the status of implementation of the strategy, details of project cost and financial progress against each of the 20 strategic projects had not been provided in either report.

Information and communications technology policies and compliance

Policies on important subjects, such as information security, disaster recovery, cloud computing, minimum security for websites, videoconferencing, mobile devices, email services or remote access, remain to be promulgated or revised. A policy compliance function to monitor, measure and report on policy implementation is yet to be put in place. Without a system to monitor and ensure compliance with ICT policies across the departments and duty stations, there is limited assurance of such compliance. Furthermore, the Administration has indicated that the self-regulatory policy compliance function mentioned in the first and second reports on the status of implementation of the strategy has not been fully implemented, owing to a lack of resources.

Information and communications technology human resources

ICT staff and their expertise are important assets in the implementation of the strategy. In accordance with the strategy, the Office of Information and Communications Technology is required to work with the Office of Human Resources

[1] The compact is a commitment made by each senior manager to achieve certain objectives, which would be reflected in the workplans and performance assessments of staff at all levels, and for which the Secretary-General will hold senior managers accountable.

Management to create requisite training programmes to promote technical skills. The Board observed that, although training programmes were developed, they could not be implemented owing to a lack of resources. Against the requirements projected by the Office of Information and Communications Technology for training, the funds provided for substantive and technical ICT skills training were less than 5 per cent.

Modernization activities

Information security

While there had been significant progress (60 per cent) by the end of 2015 in the implementation of the strategic project on information security across the Secretariat, a mere 5 per cent progress rate was achieved in 2016. Network security, the classification of information assets and the mandatory implementation of minimum requirements for public websites were areas marked by little progress. The Board also observed that a high percentage of senior officials (Under-Secretaries-General, Assistant Secretaries-General and Professionals) and staff members had not yet undertaken the mandatory information security training.

Transformation activities

Application management

Of around 2,416 applications listed in the United Nations application portfolio repository, the Board observed that 695 applications did not have defined timelines for consolidation. In addition, most of the 1,300 or so websites maintained across the Organization lacked standardization and were not in compliance with ICT policies on public websites, exposing the entire network to serious security risks. Furthermore, the website rationalization had not yet commenced. This is an area where cooperation and support of the departments and offices are essential to make significant progress towards website consolidation and rationalization. The Administration has also indicated that the consolidation of ICT systems was a prerequisite for website rationalization.

User satisfaction with information and communications technology services

With the help of the Office of Information and Communications Technology, the Board conducted a satisfaction survey to assess user perception of the quality and usefulness of the ICT services and products implemented to improve organizational efficiency, across the Secretariat. The survey was originally scheduled from 30 January to 6 February 2017 but was later extended until 12 February 2017. For the purpose of the present report, only the 2,979 complete responses received by 6 February 2017 have been considered. The survey results are provided in annex V.

Innovation

While, according to the strategic road map, innovation was to be implemented beginning January 2015, the Administration has indicated that innovation initiatives undertaken by the Office of Information and Communications Technology were isolated innovations and not based on any standards, including the Control Objectives for Information and Related Technology (COBIT).[2] The Board observed that, after identifying a few emerging areas, nothing further had been done. The Administration stated that the Office of Information and Communications Technology would work on innovation in future, as the consolidation process has now progressed.

[2] A business framework for the governance and management of enterprise information technology.

Optimal use of information and communications technology resources

Governance and review process of information and communications technology investments

Despite the strategy emphasizing that the Office of Information and Communications Technology would oversee and monitor ICT investments to enable more informed decision-making and holistic reporting of global costs, the involvement of that Office and of the Chief Information Technology Officer in ICT procurements has been limited, and ICT procurements undertaken throughout the Secretariat are not subject to a central review or governance, as required in the strategy.

Global sourcing

The strategy requires the negotiation of contract discounts using the global purchasing volume of hardware and software licences. Even though the Secretary-General indicated in his reports on the status of implementation of the strategy that the Organization negotiated discounts in the areas of infrastructure, externally acquired licences and related ICT services, the Office of Information and Communications Technology has not carried out any analysis of discounts obtained so far through global sourcing. The Board observed that neither a clear road map nor a target had been set to achieve cost optimization benefits using global sourcing opportunities.

Defragmentation

The Board observed that progress in defragmentation and consolidation of ICT resources had been slow, with only 3 of 70 ICT units across the Secretariat having been consolidated as of January 2017. The Chef de Cabinet issued an interdepartmental memorandum in February 2016 seeking support and cooperation from the departments and heads of offices in transitioning ICT functions to the enterprise delivery framework, as well as to work on the process of identifying and defragmenting internal departmental ICT functions and transitioning them and corresponding resources to the Office of Information and Communications Technology. Notwithstanding the memorandum, the pace of implementation of this element of the strategy, which will lead to an optimization of ICT resources across the Secretariat, has been slow, and even the ICT units within the Department of Management have not yet been consolidated.

Recommendations

While the recommendations of the Board are presented in detail throughout the report, its main recommendations are that the Administration ensure that:

(a) **(i) Bodies under the ICT governance framework engage proactively in monitoring progress, resolving interdepartmental issues to ensure the implementation of the strategy in compliance with General Assembly resolution 69/262; (ii) the performance measures in the senior managers' compact with regard to the strategy are made more objective and quantifiable; (iii) immediate steps are taken to issue the necessary delegation and designation policies; and (iv) departments submit road maps and take the steps necessary for aligning their business plans with the strategy;**

(b) **The Chief Information Technology Officer and the Office of Information and Communications Technology, as the central authority for implementation of the strategy and its monitoring, not only track the project timelines closely but also monitor the cost of each of the strategic projects to ensure transparency and accountability in substantial investments;**

(c) The Office of Information and Communications Technology completes the task of formulating and promulgating ICT policies in a time-bound manner and establish the proposed self-regulatory compliance function;

(d) Sufficient funds are earmarked for implementing the training plan;

(e) All personnel complete the mandatory information security training;

(f) Progress in website rationalization and harmonization and in application rationalization and consolidation is expedited to mitigate security risks, reduce costs and optimize application value;

(g) The Office of Information and Communications Technology develops a detailed plan of action on innovative emerging technology in consultation with stakeholders;

(h) The relevant policies are suitably revised to ensure that ICT procurements above a prescribed threshold are processed through Umoja and vetted centrally by the Office of Information and Communications Technology to ensure uniformity, standardization, compliance with ICT policies and benchmarking of costs;

(i) A clear road map is developed to realize cost optimization benefits through global sourcing;

(j) Effective steps are taken to ensure the implementation of the enterprise delivery framework and reduce the fragmentation of ICT resources.

I. Background

1. At its sixty-ninth session, in 2014, the General Assembly adopted resolution 69/262, in which it endorsed the information and communications technology (ICT) strategy for the United Nations proposed in the report of the Secretary-General (A/69/517). The idea behind the strategy is to create a unified global provision of ICT to enable the successful delivery of the United Nations' mandate. It is aimed at aligning all ICT activities with the United Nations' goals and it has identified three objectives to that end: (a) the direction of ICT in support of organizational priorities, such as Umoja; (b) the harmonization of existing infrastructure and processes; and (c) greater emphasis on innovation to support the substantive work of the United Nations. To achieve those objectives, the strategy focuses on five major areas, known as key drivers, namely, modernization in support of organizational priorities, transformation of ICT delivery, innovation to foster new technological solutions in the long term, strengthened governance and leadership framework, and optimal use of ICT resources. The original strategic road map is provided in annex II.

2. The Secretary-General submitted his first report on the status of implementation of the strategy (A/70/364 and Corr.1) in September 2015 and his second report (A/71/400) in September 2016.

II. Mandate, scope and methodology

3. The Advisory Committee on Administrative and Budgetary Questions considered the report of the Board on progress in the handling of ICT affairs in the Secretariat (A/70/581) and recommended to the General Assembly that the Board submit an annual progress report during the five-year implementation period of the strategy. The Assembly endorsed the recommendation in resolution 70/238 B. The present report is submitted in compliance with that resolution and covers the period up to December 2016. The audit was conducted from 9 January to 17 February 2017.

4. The audit was conducted primarily to enable the Board to form an opinion on progress in the implementation of the strategy across the Secretariat. The audit included discussions with the Administration and selected user departments.

5. A satisfaction survey was also conducted with the help of the Office of Information and Communications Technology to assess user perception of the quality and usefulness of the ICT services and products implemented to improve organizational efficiency, as well as the level of awareness about the strategy and the level of satisfaction against each ICT service, across the Secretariat. Users were asked to rate their satisfaction level on a scale of 0 to 5, i.e. from "least satisfied" (1) to "most satisfied" (5), with 0 meaning "not aware". For the purpose of the present report, only the 2,979 complete responses received by 6 February 2017 have been considered. The survey results are provided in annex V.

III. Findings and recommendations

A. Follow-up to previous recommendations of the Board of Auditors

6. The Administration has taken action to address a number of the Board's previous recommendations. In most cases, however, action is still under implementation. Of the 23 recommendations made in the Board's previous reports (A/67/651 and A/70/581), 2 (9 per cent) have been fully implemented and 21 (91 per cent) are under implementation.

7. Annex I summarizes the status of implementation of the recommendations. Further comments on progress in implementing previous recommendations are contained in the relevant sections of the present report.

B. Governance and leadership

Governance framework and accountability

8. The strategy was expected to strengthen transparency and accountability and ensure value for money in ICT investments. A new governance framework for implementation of the strategy was proposed with the crucial leadership role of overseeing the ICT architecture, standards and investment choices assigned to the Chief Information Technology Officer. At the apex level of the governance framework are two executive-level advisory groups, namely, the Information and Communication Technology Executive Committee and the Information and Communication Technology Board. Apart from those two executive-level bodies, the ICT governance framework consists of the Information and Communication Technology Policy Committee and the Architecture Review Board.

9. The ICT Executive Committee is the highest-level decision-making body in the Secretariat on overall ICT strategic direction and prioritization, which includes the entirety of ICT in the Secretariat. The Committee is to meet at least once a year and as required, and is to be updated on projects on a quarterly basis.

10. The ICT Board is responsible for ensuring a coherent and coordinated global usage of ICT across departments and duty stations in line with the objectives of the Secretariat and the general policy direction provided by the ICT Executive Committee. The ICT Board is to meet at least once every six weeks.

11. Apart from the ICT Executive Committee and the ICT Board, the governance framework also has an ICT Policy Committee for reviewing and prioritizing policy proposals received from other governance bodies, service owners and subject matter experts, and assessing their applicability in the Secretariat.

12. Finally, the Architecture Review Board is responsible for reviewing and formulating the enterprise architecture of the United Nations and associated standards and policies, and for providing recommendations to the Chief Information Technology Officer.

Role of the Chief Information Technology Officer

13. In accordance with the strategy, the Chief Information Technology Officer is the most senior manager responsible for leading all ICT activities globally in the Secretariat and for meeting the objectives of the strategy. The Chief's leadership role is a crucial component of governance framework in ensuring accountability to Member States.

14. For a successful implementation of the strategy, the legitimacy, authority and powers of the governance mechanism are to be clearly defined and accepted by all heads of business units. However, despite the crucial position occupied by the Chief Information Technology Officer in the revised strategy, the Board observed that the Secretary-General's bulletin (ST/SGB/2016/11) establishing the organizational structure and scope of activities of the Office of Information and Communications Technology, the role and responsibilities of Chief Information Technology Officer, regional technology centres, enterprise application centres and ICT units in the Secretariat was only issued on 21 September 2016, that is almost two years after the promulgation of the revised strategy. The Office of Information and Communications Technology confirmed that the existing Secretariat policies and

procedure have been updated in line with the revised strategy, but it also stated that delegation and designation policies had not been issued by the Secretary-General.

15. The absence of a formal legal authority for such a long period is not in the best interests of the implementation of the strategy.

Enhanced accountability

16. The alignment of the departmental business plans with the strategy is crucial to ensure its effective implementation. It also requires that the senior leaders in the Organization support ICT endeavours through their compacts[1] and that their expected accomplishments and performance measures be tied to their implementation of the strategy.

17. The Board observed that the performance measures for the implementation of the strategy indicated in the compact were very general in nature and not specific enough to facilitate the objective measurement of performance against the given criteria. The compact only reflected general high-level responsibilities that are not empirically and objectively assessable.

18. The Administration informed the Board that, in July 2015, the Office of Information and Communications Technology had promulgated and circulated the strategy guidelines to all heads of departments, setting out the actions that each entity was required to take for the successful implementation of the strategy. The Board observed that the offices and departments of the Secretariat and the field missions had not prepared annual ICT workplans setting targets for implementing the strategy and monitoring year-end results.

19. In the course of the audit, the Board observed that the Office of Information and Communications Technology could not make readily available the updated information (as of December 2016) on the status of implementation of the strategy in different departments and that the Office had to put in considerable effort to collect that information. There were no regular progress reports from different departments to the Office of Information and Communications Technology that would have enabled constant monitoring and the provision of timely guidance and intervention, where needed.

20. The Board is of the view that the lack of periodic reporting on the implementation of the strategy to the Office of Information and Communications Technology is bound to have an adverse impact on the capability of the bodies under the ICT governance framework and the Office of Information and Communications Technology to implement the strategy.

21. **The Board recommends that the Administration ensure that: (a) bodies under the ICT governance framework engage proactively in monitoring progress, resolving interdepartmental issues to ensure the implementation of the strategy in compliance with General Assembly resolution 69/262; (b) the performance measures in the senior managers' compact with regard to the strategy be made more objective and quantifiable; (c) immediate steps be taken to issue the necessary delegation and designation policies; and (d) departments submit road maps and take the steps necessary for aligning their business plans with the strategy.**

Project implementation

22. The strategy provided a road map for the implementation of key drivers, that is, modernization, transformation, innovation, governance and optimal use of ICT resources over the period covered by said strategy. In his first report on the status of implementation of the strategy, the Secretary-General reported a 45 per cent

completion of the strategic projects, the remaining 55 per cent being on schedule for completion. In his second report, he reported that 7 of the 20 projects had been completed. Of the remaining 13 projects, 10 had seen their scope modified or had been the subject of a request for modification that was pending with the Project Management Board for approval.

23. Modifications in the scope of nearly half of the strategic projects indicated that initial project formulation had not been comprehensive and that some activities and milestones might not have been included in project formulation.

Project delays

24. The Board observed that, of 20 strategic projects, 11 had time overruns, ranging from 12 to 54 months, compared with the original road map.

25. The Administration stated that the strategy had been approved only at the end of 2014 and that many of the dates indicated therein had been preliminary and affected by external factors. It added that the delays reflected only one aspect of implementation, that the strategy was dynamic and that, at the request of the Advisory Committee, a revised plan had been included in the first report on the status of implementation of the strategy.

26. The Board noted that, even when taking into account the revised timelines, six projects had been delayed beyond their expected completion dates. Moreover, three projects expected to be completed by March 2017 had achieved only a 65 to 70 per cent completion rate.

Monitoring of the strategic projects

27. Project monitoring involves continuous tracking of physical and financial progress to control time and cost overruns and execute the project in an economic, efficient and effective manner. However, the Board observed that, while the project timelines and the physical progress achieved in terms of percentage completion had been presented in both reports on the status of implementation of the strategy, details of project cost and financial progress against each of the 20 strategic projects had not been provided in either.

28. Furthermore, the Secretary-General had stated in his first report that all critical ICT projects were overseen by a newly established Enterprise Project Management Office, which tracked the progress of each project on a monthly basis by means of performance indicators, including with respect to scope, timelines, costs and human resources. The Enterprise Project Management Office is mandated to ensure that ICT investments are aligned with organizational goals and priorities, and its scope and function span the entire life cycle of a project, from the proposal stage (business case) to completion and benefit realization.

29. The Board, however, observed that the Enterprise Project Management Office and the Office of Information and Communications Technology were not monitoring the cost of implementation of the 20 ICT strategic projects, nor could they provide details of the estimated cost of each project and the progress of expenditure incurred against it, across the Secretariat. With regard to the review of the project cost and business case, the Enterprise Project Management Office stated that it was unable to carry out this task on account of limited resources.

30. The Administration stated that the cost overruns of projects were monitored by comparing budgets spent with actual budgets. It explained that a majority of the Office of Information and Communications Technology projects were undertaken using existing resources and that no additional budgets were applied to the projects.

Hence, it was added that, applying zero budgets, risks of cost overruns did not usually occur.

31. The reply received does not address the issue of monitoring the cost of the strategic projects and avoiding cost overruns. It is pertinent to point out that cost overrun is different from excess expenditure incurred against total budget approval for any organization in any particular year or biennium. The Board is of the view that each project has a specified project life cycle and a total cost of implementation, irrespective of whether it is funded from existing resources or whether additional budget is applied to the projects. There can be cost overruns in a project in case of: (a) delay in the implementation of projects resulting in cost escalations; (b) uneconomic and inefficient execution of the project; and (c) change in the scope of the project. In such cases, the actual cost incurred over the project life cycle may exceed the original estimated project cost, resulting in a cost overrun even where projects are executed using existing budgetary resources. In such cases, the project will utilize more resources than expected, adversely impacting other projects funded from the existing budget. The Board noted that the Office of Information and Communications Technology had not estimated the cost of implementation of each of the 20 strategic projects across the Secretariat and was not monitoring the progress of expenditure against them.

32. This is a weakness in the system of project assurance and project performance monitoring of ICT strategic projects, and there is a risk for project costs to escalate, owing to slippages in adhering to timelines, the uneconomic and inefficient execution of the projects, repeated modifications to or increase in the scope of projects, etc.

33. **The Board recommends that the Chief Information Technology Officer and the Office of Information and Communications Technology, as the central authority for implementation of the strategy and its monitoring, not only track the project timelines closely but also monitor the cost of each of the strategic projects to ensure transparency and accountability in substantial investments.**

Information and communications technology policies and procedures and compliance

34. The Chief Information Technology Officer has been assigned the overall responsibility under the strategy for establishing appropriate polices and standards on ICT matters. This is also articulated in the Secretary-General's bulletin of 21 September 2016 (ST/SGB/2016/11). Accordingly, the Office of Information and Communications Technology has issued an ICT policies manual, in which ICT policies are divided into eight categories, namely, acceptable use, asset management, applications, ICT governance, information management, infrastructure management, security and other categories. In his second report on the status of implementation of the strategy, the Secretary-General reported that a comprehensive body of 38 policies covering a range of ICT management topics had been issued.

35. However, policies on important subjects, such as information security, disaster recovery, cloud computing, minimum security for websites, videoconferencing, mobile devices, email services or remote access, remain to be promulgated or revised. The Board also observed that, at present, 8 policies are held at various levels in the Office of Information and Communications Technology and 18 more are due for "scheduled revision" by the ICT Policy Committee. The status of pending policies as of January 2017, as communicated by the Office, is included in annex III.

36. One of the 20 strategic projects concerns ICT policies and procedures and compliance. The project was aimed at developing and issuing a body of ICT policies and procedures by 30 September 2015. In his first report on the status of

implementation of the strategy, the Secretary-General reported an 81 per cent progress rate as of September 2015. In his second report, he stated that the project had been subsequently modified to include compliance with policies and procedures and that the completion date had been revised to 31 December 2016. The status of completion of this modified project with a revised scope is only 45 per cent, according to the status report on the project made available to the Board by the Office of Information and Communications Technology in January 2017, thus lagging behind the target completion date of 31 December 2016.

37. In his first report on the status of implementation of the strategy, the Secretary-General explained that an ICT policy compliance function was being established as part of the self-regulatory initiative to provide support for supervisors in carrying out their management responsibilities. In his second report, he stated again that a policy compliance function to monitor, measure and report on policy implementation had been instigated.

38. In response to the Board's request for information on the system that had been put in place to review, monitor and ensure compliance with ICT policies across all departments and duty stations, the Office of Information and Communications Technology indicated that compliance management for all ICT functions had not been fully implemented, owing to a lack of resources. The Administration also recognized that much needed to be done but added that, given the current constraints, the highest possible level of compliance had been achieved.

39. The Board is of the view that continued monitoring and enforcement of compliance with all ICT policies across the departments and duty stations are essential to ensure the standardized management of ICT resources and improve a coordinated use of ICT in the Organization.

40. **The Board recommends that the Office of Information and Communications Technology complete the task of formulating and promulgating ICT policies in a time-bound manner and establish the proposed self-regulatory compliance function.**

Information and communications technology human resources

41. The strategy recognizes that ICT staff and their expertise are important assets in the implementation of the strategy and that performance management and training of staff are codependent. In accordance with the strategy, the Office of Information and Communications Technology is required to work with the Office of Human Resources Management to create requisite training programmes to promote technical skills as the basis for career progression, since development and training must be geared towards producing a highly skilled and motivated ICT workforce. The Office of Information and Communications Technology is also to consult the Office of Human Resources Management in relation to the creation of new generic job profiles and standard job profiles on the basis of the revised ICT needs and career paths; reclassifying ICT staff positions to ensure that the Organization adapts properly to emerging technology, and establishing a training and mobility programme for ICT personnel.

42. In the first report on the status of implementation of the strategy, emphasis was put on regularly assessing new technology and reinforcing training as one of the important activities necessary to align ICT with the United Nations' goals. In the second report, the Secretary-General provided information on career development and training for ICT staff, as well as on ICT workforce in non-peacekeeping offices and peacekeeping operations. He also stated that strategic skills for, inter alia, enterprise architects, business architects, process engineers, scenario focus engineers, solution architects and information architects needed to be built by ICT

entities through training and skill upgrades. Emphasis was also placed on maintaining in-house expert capacity for sustainable support and the maintenance of enterprise systems for optimal resource management.

43. In response to queries on the details of short-term, medium-term and long-term training plans, training needs analyses carried out, capacity gaps identified, training programmes developed and trainings conducted, among others, the Administration stated that training plans were developed but could not be implemented owing to a lack of resources. It was stated that, in 2015, $593,000 had been requested for training in substantive and technical ICT skills, but that only $27,400 (4.62 per cent) had been provided, which had been spent on an Information Technology Infrastructure Library certification request for 2015. As regards 2016, it was stated that, to upgrade substantive and technical IT skills, $681,241 had been required, but that only $29,509 (4.33 per cent) had been approved and that all had been spent.

44. The reply summarized above indicates that there is a shortfall in the achievement of planned targets for building capacity in substantive and technical IT skills. The lack of technical and substantive training provided to ICT staff may result in competency gaps, affect the organizational efficiency in terms of service delivery and lead to the non-realization of the full benefits of the implementation of the strategy. Furthermore, the Board observed that no road map had been prepared to provide visibility in the future plan of action to actions that would bridge the competency gaps by imparting requisite training programmes to staff in a manner matching the pace of modernization of ICT networks and infrastructure, the deployment of various enterprise applications and the consolidation and rationalization of ICT resources across the Secretariat.

45. **The Board recommends that the Administration ensure that sufficient funds are earmarked for implementing the training plan.**

Performance management framework

46. The strategy states that the Secretariat has created an ICT performance management framework, which the Office of Information and Communications Technology started implementing in 2013. It also states that the framework will provide the basis for optimizing and harmonizing ICT assets, projects, services and support, and a means for aligning the performance of ICT with the business needs of the Organization.

47. Upon its request for details of the ICT performance management framework, the Board received a copy of a draft performance management plan. The Administration stated that it was not fully implemented, owing to a lack of resources.

48. The Administration elaborated that, at present, it did not have an ICT policy compliance function in place, owing to a lack of resources. It added that, in 2017, a scorecard methodology would be developed to measure the performance of ICT units covering all ICT functions and that this methodology would rely on key metrics and self-reporting. This would be enhanced by in-depth reviews of areas of concern. This methodology was under development and was taking into account the industry's best practices. The Administration expected to fully implement this approach in line with the strategy implementation.

49. The reply of the Administration confirms that the performance management framework is still being developed, on the basis of a scorecard methodology. The Administration concurred with the Board, while adding that there existed multiple competing priorities.

50. **The Board recommends that the formulation and implementation of the ICT performance management framework be expedited.**

C. Modernization activities

Information security

51. The information security framework proposed under the strategy committed to covering the areas of full visibility of ICT assets, the establishment of an intrusion detection service, vulnerability management, policy development, compliance and enforcement, intelligence sharing, data classification schemes and privacy policy, security architecture and application development, and enhancements to security infrastructure. In the strategy, it is also proposed that the central authority for information security be vested in the Chief Information Technology Officer.

52. In his first report on the status of implementation of the ICT strategy, the Secretary-General reported a 60 per cent completion rate for the strategic project for information security, originally scheduled for completion by 31 December 2015. The Board had noted in its previous report (A/70/581) an overall achievement of 62.5 per cent of the project, with four initiatives completed and six indicated as ongoing but on track. According to the second report, the completion rate had reached 65 per cent. The key milestones relating to mandatory security awareness training, email filtering and intrusion detection were stated to have been achieved. The Board therefore noted that a mere 5 per cent progress rate had been achieved in 2016.

53. The Administration informed the Board that it recognized that more complex elements of the plan to strengthen information security across the Secretariat required sustained effort and could not be fully implemented as a one-time project. It added that, given the high degree of fragmentation, progress in the implementation of the action plan was contingent on the level of visibility and access shared by offices and departments.

54. The Board observed that the completion rates of mandatory information security awareness training ranged from 0 to 6 per cent among senior officials (Under-Secretaries-General and Assistant Secretaries-General), 0 to 25 per cent among Professionals and above, and 0 to 34 per cent among remaining staff. Even in the Office of Information and Communications Technology, the mandatory information security awareness training had not been taken by all staff, with completion rates ranging from 0 to 53 per cent among Professionals and above, and 0 to 40 per cent among remaining staff.

55. **The Board recommends that the Administration ensure that all personnel complete the mandatory information security training.**

56. The Administration stated that, in 2016, more than 17,000 staff members had completed the course and that it should be feasible to reach a 90 per cent rate of completion among staff by the end of 2017.

Network segmentation

57. One of the initiatives under the strategic project on information security is network security and the segmentation of network zones. The Board noted that network segmentation had been implemented in the enterprise data centres as well as at the Headquarters data centres (in New York and New Jersey, United States of America), and that implementation at other data centres was ongoing, with plans being prepared to extend network segmentation to end-users segments. The Board observed that the initiative of network segmentation had been originally scheduled

for completion by 31 December 2015, and later extended to 31 December 2016. This initiative is still under implementation.

58. The Administration stated that, in line with the strategic goal of a reduction of data centres, network segmentation was only planned to be implemented in those data centres that were expected to be retained, as well as in campus networks that connected end-user devices, and for non-traditional ICT systems, such as those used for security or facilities management. The Board noted that, since the promulgation of the strategy, the number of data centres had been reduced from 102 to 86, implying that network segmentation still remained to be implemented in those 86 data centres.

Classify information assets

59. The Administration informed the Board that a memorandum had been issued to assign specific responsibilities for information classifications to departments and offices and that, as from 1 January 2017, all information that had not been classified as either "confidential" or "strictly confidential" would be treated as unclassified. It added that, as unclassified content was not explicitly marked, it was not in a position to determine the level to which content owners complied with the policy. The Board observed that, although the responsibility to classify information on the basis of its sensitivity had been assigned to the departments and offices, there was no assurance that those had classified all information in line with its security or sensitivity level, given the non-availability of a function to verify compliance. Delay in classification of the information assets and the absence of a compliance function carried the risk of exposing significant sensitive information assets.

60. **The Board recommends that the Office of Information and Communications Technology create a mechanism for departments and offices to provide periodical updates on the implementation of the strategic project on information security.**

Disaster recovery and business continuity

61. Information technology disaster recovery is one of the core elements of the organizational resilience management system of the Secretariat, approved by the General Assembly in resolution 67/254 A. The strategy proposes to strengthen the information technology disaster recovery process in accordance with the decisions of the Assembly and the recommendations of the Board.

62. In 2014 and 2015, 171 critical systems and applications supporting critical processes were identified as part of the implementation of the operational resilience management system across the Secretariat. Of those, only 34 applications had fully documented and tested disaster recovery plans with capability to be restored within 24 hours of any incident that would render the application unusable.

63. Considering the risk involved in the lack of adequate disaster recovery arrangements in such a large number of critical systems, the Senior Emergency Policy Team decided in July 2015 to review the list of critical applications in accordance with the Organization's established criteria, with a view to reducing the total number to approximately 20 critical applications, in line with common best practices for similarly sized organizations. Accordingly, the Office of Information and Communications Technology, in consultation with other departments and offices, drew a list of 24 critical applications, which was sent to all heads of departments and offices in November 2015. The Office of Information and Communications Technology stated that disaster recovery plans had been prepared and were in place for 21 of the 24 critical applications.

64. Upon analysis of the original list of 171 critical systems and applications, the Board observed that 17 "mission-critical" applications relating to the Department of Field Support had not been considered as critical and, therefore, had not been included in the final list of 24 critical applications requiring disaster recovery plans. Similarly, about 40 applications proposed to be replaced by other systems had not been classified as critical.

65. The Board is of the opinion that, given the fragmented nature and size of the United Nations systems, the criteria based on a fixed number of applications for determining criticality may not be appropriate, as several applications that are critical yet not enterprise-level may get excluded from the disaster recovery mechanisms.

66. The Board is also of the view that, until the applications are consolidated, they remain critical and the status of replacement of such applications needs to be closely monitored. The Board is therefore of the opinion that a further review of applications should take place to clearly establish the actual number of critical applications on the basis of business to date.

67. **The Board recommends that: (a) the criteria for determining the criticality of applications be reviewed and the number of critical applications be ascertained on the basis of an analysis; and (b) the number of critical applications be progressively reduced by replacing them with new systems and enterprise-level applications through consolidation and rationalization.**

D. Transformation activities

Enterprise delivery framework

Application management

68. Numerous application centres in the Organization worked independently and lacked the security required for their scale of work and responsibilities. To address this issue, it was proposed in the strategy that the then existing application centres in New York, Bangkok and Vienna be strengthened and that their facilities become enterprise application centres. Such centres have since been established in those three duty stations to provide a focal point for application development, thereby preventing fragmentation.

69. Lack of control over applications exposes the Organization to security risks and increases the risk of duplicating expenditure. In its previous reports, the Board had determined that the Administration had no overall software application strategy and that many of the applications in use across the Secretariat had been developed locally and performed redundant functions. In response to those concerns, the Chief Information Technology Officer introduced an application management strategy in May 2015.

70. A global United Nations application portfolio has since been published, wherein the applications in use across the Organization have been identified to a large extent, though not fully.

71. In his first report on the status of implementation of the strategy, the Secretary-General reported that phase I of the strategic project on application consolidation and rationalization had been completed in July 2015.

72. In his second report, he reported that, since 2014, the number of applications had been reduced from 2,340 to 1,652 through planned consolidation and migration, and that the goal was to further reduce their number to 1,000 by the end of 2020. In addition, he stated that new standard applications had been delivered in various

areas, including modern administrative and collaborative solutions, workflow systems and solutions to support the work of the United Nations and field systems.

73. The consolidated status of application rationalization as at 8 February 2017 and as communicated by the Office of Information and Communications Technology is provided in annex IV. The data indicate 2,416 applications, as opposed to the 2,340 referred to in the second status report. Analysis of the data showed that 695 of the 2,416 applications listed did not have defined timelines for consolidation and that 46 applications were yet to be reviewed and road maps identified for rationalization. The Board noted that the application management strategy referred only to a broader plan (2016-2020) to defragment and rationalize existing applications and did not detail specific measurable financial and technical resource requirements and institutional arrangements.

Website rationalization

74. In his first report on the status of implementation of the strategy, the Secretary-General described milestone activities for the website consolidation and rationalization project, such as developing a website technology strategy and plan, developing a United Nations website consolidation solution, harmonization and identifying and remediating websites, with a timeline for completion of November 2017. He reported a 42 per cent completion rate of the project. However, the Board noted that the second report did not mention the project.

75. It is indicated in the status report on the global strategy projects that, as at 25 January 2017, phase I of the website harmonization project had been completed, a website technology strategy and plan had been prepared, a United Nations website consolidation solution had been developed and a high-level site review and level 1-4 site harmonization had been completed. However, phase II of the website rationalization process is yet to commence. There are around 1,300 websites maintained across the Organization, the majority of which lack standardization and are not in compliance with the ICT policies on public websites, exposing the entire network to serious security risks. Given the significant security implications, progress in website rationalization and consolidation is not satisfactory.

76. The Administration stated that website rationalization relied on offices and departments implementing the strategy and transitioning to an enterprise approach. It added that the consolidation of ICT systems was a pre-requisite for website rationalization.

77. **The Board recommends that progress in website rationalization and harmonization and application rationalization and consolidation be expedited to mitigate security risks, reduce costs and optimize application value.**

Enterprise help desk

78. In the strategy, it is proposed to harmonize help-desk functions to transform them into a global, cost-effective and more efficient shared-service model, which will provide global around-the-clock coverage, along with the regional technology centres. These global shared-service centres, known as enterprise service desks, are required to support enterprise-wide applications and infrastructure. The establishment of standards for tracking problems and reporting is integral to the successful implementation of an enterprise application.

79. As proposed in the strategy, the enterprise service desk called the Unite Service Desk first became operational in Bangkok in September 2014, followed by similar desks in Nairobi, Geneva, New York and Brindisi, Italy. These five hubs

serve as a single point of contact for service requests, problem reporting or enquiries for all key enterprise ICT applications.

80. The Unite Service Desk has adopted the Information Technology Infrastructure Library framework for the management of users' requests concerning enterprise applications, establishing different processes for handling incidents (e.g. incident management), requests for service (e.g. request fulfilment management) and problems (e.g. problem management).

First-level resolution rate

81. The first-level resolution rate is the percentage of contacts that are resolved by the service desk upon first interaction with the customer. The first-level resolution rate is a measure of how effectively the service desk conducts its business. The Board obtained the data of service requests to the Unite Service Desk for the years 2015 and 2016 from the Administration. The analysis of the data is presented below.

82. The Board noted that the Administration measured the first-level resolution rate as the total number of tickets resolved at the first level divided by the total number of tickets that could potentially be resolved at the first level. The Board also observed that the Administration had only considered incidents for calculating the first-level resolution rate and had excluded requests for service from the purview, on the assumption that all requests for service were resolvable at the second level only.

83. The Board holds that, by excluding all requests for service tickets, the calculation made by the Administration may not depict the right picture, as such tickets may include requests that could still be potentially resolvable at the first level, provided that the Administration had developed standardized rules for requests for service. The measure adopted by the Administration needs to be refined to define the requests for service that are resolvable at the first level.

84. An analysis by hub of first-level resolution rates indicated that the performance of Unite Service Desks in Geneva and New York in resolving service requests at the first level was below the performance of other Unite Service Desks, as shown in the table below.

Analysis by hub of the Unite Service Desks' performance

Assigned to group	*First-level resolution rate (2016)*
All **Unite Service Desks**	80 per cent
Unite Service Desk in **Bangkok**	81 per cent
Unite Service Desk in **Geneva**	65 per cent
Unite Service Desk in **Nairobi**	87 per cent
Unite Service Desk in **New York**	76 per cent

Source: Analysis of data held by the Unite Service Desk.

85. The differences in the first-level resolution rates point towards variations in the level of capability of the different service desk hubs (including the agents) to handle tickets.

86. **The Board recommends that the Administration devise a first-level resolution rate measure by classifying the requests for services that could potentially be resolved at the first level.**

E. Innovation

87. In accordance with the strategy, there are many ways in which ICT is going to have an impact on how the United Nations is expected to work, in relation to, for instance, field commodity management; fibre optics and digitization; enterprise computing; mobile technology, mobile solutions and cloud computing; and the analysis of data for tracking and early detection purposes. The Organization should expect ICT to be open to technological advances to support the substantive work of the United Nations. It was also envisaged that the Office of Information and Communications Technology would explore opportunities to develop capacity in analytics and potential means of collaboration with United Nations entities throughout the global ICT community on the development of analytics solutions to allow for operational flexibility in support of the delivery of their mandates. The strategy specifically introduces innovation as phase II of the road map, to bring the Organization up to date with other appropriate modern ICT practices in the long term, beginning January 2015.

Plan for innovation

88. In his second report on the status of implementation of the strategy, the Secretary-General described the progress made in the development of tools to inform policy decisions among Member States, enabling a multidimensional analysis of development based on economic, social and environmental factors. In his second report, he listed a coherent set of innovative technology tools to support organizational priorities as part of a vision of the digital future of the United Nations.

89. In response to the Board's enquiries, the Administration submitted a business intelligence and analytics white paper and stated that the difficulties in implementation were due to the high degree of system fragmentation, reluctance to share data and the lack of governance in system development. The Board observed that a white paper was not a substitute for a well-laid-out concrete plan detailing resource requirements, arrangements and timelines. The Administration stated that the stage of implementation of the strategy did not correspond to mature and well-established innovation activities. It added that the fact that no concrete and detailed plan had been provided was in keeping with the strategy implementation, which established innovation as its phase II.

90. In response to the enquiries by the Board regarding the method, process and rationale for identifying technology and a plan of action for its implementation, the Administration stated that the Office of Information and Communications Technology would work on innovation in future as progress has been achieved in the consolidation process.

91. The Control Objectives for Information and Related Technology (COBIT)[2] best practices envisage that innovative technology must be identified, proof of concept tests carried out and utility assessed before it is implemented. The Administration stated that the innovation initiatives that it had undertaken were isolated innovations and not based on any standards, including COBIT. The Board observed that, after identifying a few emerging technology areas, nothing further had been done. However, the Board noted that the Office of Information and Communications Technology had employed creative solutions, such as public competitions, to build analytic tools. The Board appreciates the efforts of the Administration and urges it to continue to adopt innovative approaches to establish and sustain an environment favourable to innovation in analytics and other technological innovative areas.

92. **The Board recommends that the Office of Information and Communications Technology develop a detailed plan of action on innovative emerging technology in consultation with stakeholders.**

93. In response, the Administration stated that a strategy and action plan would be developed as part of phase II of the implementation of the ICT strategy and that it was contingent on progress in consolidation and the availability of resources to ensure a successful implementation.

F. Optimal use of information and communications technology resources

94. In the strategy, three areas are identified for ensuring an optimal use of ICT resources: (a) strict governance and a review process regarding ICT investments; (b) standardized and centralized products and services; and (c) defragmentation, the retirement of systems and global sourcing. The strategy places an important responsibility on the Office of Information and Communications Technology to ensure that all ICT plans, investments and plan implementation are subject to strict governance and review processes. ICT investments must focus on standardized products and services in order to realize benefits in core services and to allocate resources so that they meet the needs of the Organization in an optimal fashion. The strategy also emphasizes that the Office of Information and Communications Technology should oversee and monitor ICT investments to enable more informed decision-making and a holistic reporting of global costs. It envisages that Umoja should be a lever for presenting more consolidated ICT financial information. Furthermore, ICT governance in the United Nations requires that any planned ICT initiative that is expected to result in an expenditure of more than $200,000 be subject to governance.

95. The Administration informed the Board that the implementation of Umoja made the systematization of ICT governance possible in a manner that allowed offices and departments to utilize their funds while making ICT expenditure subject to governance. The implementation of a mandatory approval step in Umoja prior to the certification of funds would ensure the examination of all ICT expenditure for compliance with the strategy, standards, architecture and information security requirements.

96. The Administration stated that the acquisition of goods and services was undertaken by the Procurement Division at Headquarters and by the procurement units in offices away from Headquarters, economic commissions and field missions under delegated authority, in compliance with the Financial Regulations and Rules. It added that the Procurement Division communicated only large or unusual ICT procurement exercises to the Office of Information and Communications Technology for governance, and principally as professional courtesy. It also stated that procurement units throughout the Secretariat were not subject to central review or governance.

97. The reply of the Administration shows that little action has been taken to implement the provisions of the strategy. The policies and procedures governing ICT procurements have not been fully aligned with those provisions and, therefore, all ICT procurements are not subject to governance and central review, as envisaged in the strategy. This raises the risk of large ICT investments being made in non-standardized products and services and of the benefits of global sourcing not being achieved fully, in addition to continued fragmentation of ICT across the Secretariat.

98. The Administration informed the Board that it had promulgated guidelines shortly after the implementation of the strategy in addition to issuing guidelines specifically related to the budget process of the Office of Programme, Planning, Budget and Accounts. It added that governance was established in an administrative instruction as well as a Secretary-General's bulletin. It also stated that the issue was not so much one of lack of mechanisms but one of lack of compliance, and added that the budget process managed by the Office of Programme, Planning, Budget and Accounts did not recognize or require ICT governance as part of the budget process.

99. The Board also observed that, with the deployment of a procurement functionality in Umoja, monitoring, oversight and a central review of all ICT investments should not be difficult to implement by the Office of Information and Communications Technology. The Administration stated that the heads of departments were responsible for ensuring ICT initiatives, and that budgets were submitted to the Office of Information and Communications Technology as part of the governance activities. It added that the Office of Information and Communications Technology did not currently have the resources to monitor effectively overall compliance with the strategy across the Secretariat. It stated that the lack of compliance that had been identified would not be addressed by requiring the Office of Information and Communications Technology to strengthen oversight alone, and that it could only be addressed if the system (Umoja) required it. The reply of the Administration confirms that the provisions of the strategy regarding governance and the review of ICT investments and increased focus on standardized and centralized products and services have not been fully implemented.

Global sourcing

100. In the strategy, the Office of Information and Communications Technology is required to focus on defragmentation, the retirement of systems and global sourcing to ensure that all ICT resources are optimally managed. The strategy, inter alia, envisaged a central capacity located in the Office of Information and Communications Technology and involving departmental participation, that would be dedicated to managing global contracts and effective governance. The two primary target areas of the global sourcing strategy would be voice and data communications and the purchase of hardware and software licences, and the negotiation of contract discounts using the global purchasing volume of the United Nations system.

101. In his second report on the status of implementation of the strategy, the Secretary-General stated that the Organization negotiated discounts in the areas of infrastructure, externally acquired licences and related ICT, such as application development and maintenance services. The Secretary-General underlined that there was potential for implementing global sourcing through the consistent and effective use of systems contracts and enterprise agreements.

102. The Board requested the Administration to furnish details of discounts negotiated and price reductions obtained during 2015 and 2016 through global sourcing in the areas of infrastructure, externally acquired licences and related ICT services. The Administration informed the Board that global rates were in place for contracts for global sourcing for labour, and for global sourcing for licensing, but could not provide details of the discounts. It stated that the Office of Information and Communications Technology was not authorized to engage in negotiations with vendors in relation to discounts and that the contracts were negotiated by the Procurement Division. It added that, in many cases, discounts could not be determined as a similar service to compare the new pricing with was typically not provided before, and that the high degree of fragmentation meant that previous services and costs were not visible to the Office of Information and Communications Technology for comparison purposes. The Administration also

informed the Board that it had not done a comprehensive analysis of discounts and that, at present, it did not have any ICT resource optimization plan.

103. With regard to switching over from individual to enterprise licensing, it was stated that the Office of Information and Communications Technology and other ICT entities in the Secretariat regularly used the systems contract modality to ensure a streamlined procurement of standard technology and software licences, which was managed by the Procurement Division. This procurement approach ensured that the Organization availed itself of the most attractive licensing options from an enterprise licensing perspective. All those licences were drawn up as enterprise agreements which were available to all Secretariat ICT entities, providing a pre-agreed price with uniform global pricing. This was an established procurement process that was used on a regular basis in conformity with the procurement rules and regulations. The Administration added that the systems contracts had been in place for many years and that, consequently, a road map was not required.

104. The Board noted that the reply was not consistent with the assertion made in the second report on the status of implementation of the strategy that there was potential to implement global sourcing through the consistent and effective use of systems contracts and enterprise agreements. In the absence of any analysis of discounts obtained through global sourcing, it was not possible to make an objective assessment of the progress achieved in implementing global sourcing and optimizing the cost of ICT assets by means of discounts.

105. **The Board recommends that the relevant policies be suitably revised to ensure that ICT procurements above a prescribed threshold are processed through Umoja and vetted centrally by the Office of Information and Communications Technology to ensure uniformity, standardization, compliance with ICT policies and benchmarking of costs.**

106. **The Board also recommends that a clear road map be developed to realize cost optimization benefits through global sourcing.**

Defragmentation of information and communications technology resources

107. In the strategy, it was emphasized that, as part of its improved stewardship, the Office of Information and Communications Technology would focus on defragmentation, the retirement of systems and global sourcing to ensure that all ICT resources were optimally managed. To reduce the fragmentation of ICT resources across the secretariat, the strategy provided for the implementation of an enterprise delivery framework, which involved the following:

- Transitioning data centres to the enterprise data centres in Brindisi and Valencia, Spain
- Deploying applications through the enterprise application centres in Bangkok, New York and Vienna
- Consolidating 131 service desks across the Secretariat to enterprise service desks, with five hubs (in Bangkok, Brindisi, Geneva, Nairobi and New York)

108. In his second report on the status of implementation of the strategy, the Secretary-General indicated that, during 2015 and 2016, the Office of Information and Communications Technology had fully integrated the Broadcast and Conference Support Section (formerly of the Office of Central Support Services) and partially integrated the Human Resources Services Section (in the Office of Human Resources Management) and the Financial Information Operations Service (in the Office of Programme Planning, Budget and Accounts) within the Department of Management. Ongoing consolidation with respect to the Department for General

Assembly and Conference Management, the Department of Safety and Security and the remaining offices in the Department of Management would allow for further integration of ICT posts.

109. Although there are more than 70 ICT units in the Secretariat's departments and offices across the world, only three have been completely consolidated so far. Furthermore, the Chef de Cabinet issued in February 2016 an inter-office memorandum to the Under-Secretaries-General of all the departments and heads of offices to cooperate and help to transition ICT functions to the enterprise delivery framework, and to work on the process of identifying and defragmenting internal departmental ICT functions and transitioning them and corresponding resources to the Office of Information and Communications Technology. He also enclosed a high-level schedule for the implementation of the strategy and the time frame for harmonization efforts, which are central to the strategy implementation.

110. The Board observed that, despite very specific resolutions of the General Assembly (69/262, sect. II, and 70/248 A, sect. V), the recommendations of the Advisory Committee (see A/70/7/Add.18, paras. 37-39) and the memorandum of the Chef de Cabinet, progress in the defragmentation of ICT resources across the Secretariat has been very slow. The strategy has to be implemented in a period of five years (2014-2019), in accordance with the road map, but only 3 out of the more than 70 ICT units had been brought on the enterprise delivery framework as of January 2017. The process of consolidating ICT units had not made significant progress in any of the four regions (Africa, the Americas, Asia and Europe). Even the Department of Management, which is responsible for implementing the strategy across the Secretariat through its Office of Information and Communications Technology, had not consolidated all its ICT units into the enterprise delivery framework.

111. In its resolution 71/272 B, the General Assembly reiterated its request that the Secretary-General continue his efforts to reduce the level of fragmentation of the current ICT environment across the Secretariat and at all duty stations and field missions.

112. **The Board recommends that the Administration take effective steps to ensure the implementation of the enterprise delivery framework and reduce the fragmentation of ICT resources.**

IV. Acknowledgements

113. The Board wishes to express its appreciation for the cooperation and assistance extended to its staff by the Under-Secretary-General for Management, the Communications and Information Technology Officer, the Office of Information and Communications Technology and members of their staff.

(*Signed*) Shashi Kant **Sharma**
Comptroller and Auditor General of India
Chair of the Board of Auditors
(Lead Auditor)

(*Signed*) Mussa Juma **Assad**
Controller and Auditor General of the
United Republic of Tanzania

(*Signed*) Kay **Scheller**
President of the German Federal Court of Auditors

Annex I

Status of implementation of the recommendations on information and communications technology affairs

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/70/581, summary, recommendation (a)	The Administration clarify the role and authority of the Chief Information Technology Officer in field operations by setting out clearly which activities require strong central control and which activities require or merit operational freedom	The Secretary-General bulletin on the organization of the Office of Information and Communications Technology was signed by the Secretary-General, with an effective date of 20 September 2016. It clarifies the role and authority of the Chief Information Technology Officer in all ICT matters, including field missions The Administration suggests that the status of the recommendation be changed to "implemented"	The Board notes the response and considers that the recommendation is still under implementation as the formal delegation of authority to the Chief Information Technology Officer and system for delegation and the designation of ICT functions and authority in the Office of Information and Communications Technology are yet to be notified and implemented		X		
A/70/581, summary, recommendation (b)	The Administration reassess the realism of the timetable for implementing the strategy and strengthen the project management approach, including the introduction of independent assurance arrangements	The project management approach is being further strengthened with the proposal to include agile methodology in addition to PRINCE2 to enable more flexibility in ICT projects, with a view to achieving realism in terms of timetables The Administration suggests that the status of the recommendation be changed to "implemented"	The Board considers that the recommendation is still under implementation. Independent assurance arrangements have not been made		X		
A/70/581, summary, recommendation (c)	The Administration, as a matter of urgency, formalize corporate ICT policies and procedures, including governance structures and appropriate delegations of authority, to ensure that the necessary authorities and accountabilities are in place to support the	The Office of Information and Communications Technology is in the process of formulating a new more agile and effective governance framework and the system for delegation and designation of ICT functions and authority. It is expected that governance and delegation will be established and implemented in 2017	The Board considers that the recommendation is still under implementation. The delegation of authority is still to be issued		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	implementation of the ICT strategy						
A/70/581, summary, recommendation (d)	The Administration establish a robust compliance framework with the necessary authorities to ensure adherence to Secretariat-wide ICT policies, including those on information security	The Office of Information and Communications Technology is reviewing implementation of an ICT scorecard for measuring performance and compliance in a consistent manner across the Secretariat for all ICT operations	Self-reporting compliance function are still to be introduced		X		
A/70/581, summary, recommendation (e)	The Administration further refine and improve the quality of the data underpinning the five-year forecast of ICT expenditure by increasing visibility of actual expenditure and the status of ICT assets across all of the Secretariat, including peacekeeping operations	The complete analysis of financial data, including data on planning assumptions from the Department of Field Support, was included in the report of the Secretary-General for the seventy-first session of the General Assembly (A/71/400) The Administration suggests that the status of the recommendation be changed to "implemented"	Under implementation There is no visibility of ICT assets procured from non-ICT funds and budgets		X		
A/70/581, summary, recommendation (f)	The Administration develop a statement of the expected costs and benefits of implementing the revised ICT strategy to enable strategic activities to be prioritized and resourced appropriately	The report of the Secretary-General on the ICT strategy for the seventy-first session has been issued and includes the expected costs and benefits	Under implementation There is no assessment of the total cost of implementation of the ICT strategy across the Secretariat. No benefit realization plan has been prepared and there is no monitoring of the cost of the strategic projects		X		

Report reference	Summary of recommendation	Administration's comments on status	Board's comments on status	Fully implemented	Under implementation	Not implemented	Overtaken by events
A/70/581, summary, recommendation (g)	The Administration increase the visibility of senior management in leading the implementation of the ICT strategy to ensure that all departments are committed to implementing the revised ICT strategy as mandated by the General Assembly, and that any disagreements or impediments to implementing the strategy are addressed and resolved in a timely manner	The Office of Information and Communications Technology, in addition to the ICT Executive Committee and the Management Committee, has initiated business relationship management and executive briefings to ensure that offices and departments are committed to implementing the revised ICT strategy	Under implementation Departmental business plans are still not aligned with the ICT strategy		X		
A/67/651, para. 20	The Administration develop a new ICT strategy, including a United Nations-wide information strategy and an enterprise architecture framework, that describes how information and technology will support and provide benefits for the Organization. Such a strategy needs to be consistent with United Nations objectives and realistic ambitions for transformation. The Administration then needs to make progress in the implementation of the ICT strategy in parallel with any agreed reforms to the	The report of the Secretary-General for the seventy-first session provides details on progress with the implementation of the new ICT strategy	A revised ICT strategy has been developed and was approved by the General Assembly in resolution 69/262 For this recommendation to be implemented, the Administration needs to clearly articulate: (a) how implementing the strategy will enable United Nations entities to better deliver their mandates; and (b) the alignment between the ICT strategy and other transformation initiatives The report of the Secretary-General shows that efforts have been made to align transformation initiatives and the ICT strategy. The ICT strategy is under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	Organization's operating model, culture and approach						
A/67/651, para. 29	The Administration review its arrangements for capturing information on ICT expenditure with a view to enabling more effective monitoring of costs and improved decision-making on future expenditure	All expenditure was captured by the Programme Planning and Budget Division, and all ICT commitment items were captured for the regular budget and special political missions. The methodology used is disclosed in document A/71/400. Resources are distributed and budgets are managed at a cost-centre level, which represents functional or business areas within the Office of Information and Communications Technology The Administration suggests that the status of the recommendation be changed to "implemented"	The Board notes the Administration's response and considers that this recommendation is still under implementation		X		
A/67/651, para. 30	The Administration clearly specify how the chart of accounts in Umoja will enable ICT expenditure to be captured and monitored effectively. In addition, the Administration should consider whether there are any options for improving management information on ICT expenditure that could be pursued prior to the implementation of Umoja	The data reported in the progress report reflect changes in the chart of accounts, as ICT expenditure was captured by analysing commitment item data. Financial and human resources data were consolidated and synthesized. The Office of Information and Communications Technology will continue to work on producing overall financial reports for the Office of Programme, Planning, Budget and Accounts of the Department of Management The Administration suggests that the status of the recommendation be changed to "implemented"	The Board observed that there were still ongoing issues with the monitoring of costs and considers that this recommendation is still under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/67/651, para. 31	In order to enable greater consistency and transparency with regard to ICT funding and budgets and allow better management of costs and effective prioritization, the Controller require that proposed ICT budgets set out: (a) the cost of running day-to-day services; (b) the cost of licences and maintenance costs for existing systems; (c) costs related to upgrading existing service delivery (e.g. to improve security); and (d) new costs, including strategic requirements	A memorandum on resource planning was issued for all departments to present their requirements to the regional technology centres and enterprise application centres and to ensure full transparency in ICT requirements and funding that they would be requesting The Administration suggests that the status of the recommendation be changed to "implemented"	The Administration's response does not fully address the recommendation. The Board considers this recommendation to be under implementation until such time that the compliance of such initiatives crystalizes into periodic reports		X		
A/67/651, para. 32	The entities, offices and programmes comprising the United Nations prioritize ICT funding to ensure that the right balance of attention is given to transformation, improvement and leadership, frameworks and policies, and operational services	Guidelines on resources planning have been issued in coordination with the Office of the Controller and the Programme Planning and Budget Division. All departments are required to submit their requirements to the Office of Information and Communications Technology for technical review. Departments will be developing their budget proposals upon technical clearance and under guidance from the Chief Information Technology Officer The Administration suggests that the status of the recommendation be changed to "implemented"	The Board notes the Administration's response and considers this recommendation to be under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/67/651, para. 39	As a necessary precursor to any new ICT strategy, and to reduce the substantial risks associated with the implementation of a global enterprise resource planning system, the Administration clearly document those elements of the culture, custom, practices and processes, as well as key cost and performance information, that may affect the achievability of a global ICT transformation in the United Nations. Using the results of this review, the Administration should define the Organization's overall objectives and specify realistic ambitions for global service delivery, consistent processes and a unified Organization	Umoja mainstreaming planning takes into account organizational challenges across the Secretariat. Starting with the Unite Service Desk, as the Office of Information and Communications Technology moves into other areas, it is being carefully planned at the level of every component of mainstreaming activity	The Board notes the Administration's response and considers this recommendation to be under implementation		X		
A/67/651, para. 41	The Administration recognize the changes in responsibilities and operating model across the Secretariat that are needed to deliver any new ICT strategy and accept the responsibility of senior management as a whole to deliver	The Secretary-General's bulletin on the organization of the Office of Information and Communications Technology is effective 20 September 2016 and establishes the changes in the operating model and responsibilities. The responsibilities of senior management in the implementation of the ICT strategy are incorporated in the Secretary-General's compact	The Board notes the Administration's response. The Board observed that the performance measurements for the implementation of the ICT strategy indicated in the compact were very general in nature and not specific enough to facilitate the objective measurement of the performance against the given criteria, and thus considers this recommendation to be under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	Organization-wide changes to support the Chief Information Technology Officer						
A/67/651, para. 50	The Administration: (a) emphasize the strategic priorities of the Chief Information Technology Officer by redefining the functions of the role and changing the title; (b) evaluate whether there is a need to appoint a chief technology officer or designate an existing post to assist the chief information officer in operational matters; and (c) clearly define and communicate the different roles across the Secretariat, in particular the scope and remit of the renamed chief information officer with regard to strategy and business transformation	This recommendation is implemented. The Office of Information and Communications Technology has evaluated the need for and appointed a chief technology officer at the D-2 level, and defined the function and role in the revised ICT strategy (A/69/517). In the regular budget proposal currently before the legislative committees, the existing D-2 Director of the Office of Information and Communications Technology is proposed as the Chief Technology Officer	The Board notes the Administration's response and considers that this recommendation is fully implemented	X			
A/67/651, para. 55	The Administration plan for any parallel business and ICT activities associated with a new strategy to be supportive of the implementation of Umoja and not conflict with its objectives	This recommendation is implemented. The initiatives in the revised ICT strategy were developed to support Umoja and enterprise systems as a matter of priority	The Board notes the Administration's response and considers that this recommendation is fully implemented	X			
A/67/651, para. 56	In relation to ICT, the Administration define the leadership and	The Administration considers this recommendation to be implemented. The 2016-2017 budget reflects a major	The Board notes the Administration's response and will monitor its implementation in 2017			X	

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	executive roles, competencies and management effort that should be directed to three distinct aspects of ICT delivery, namely: (a) transformative change, innovation and leadership across the Secretariat; (b) the design and enforcement of corporate guidance, frameworks, policies and standards; and (c) operational services	shift in the allocation of resources from operations (subprogramme 6: Global Operations Division) to key transformative and critical areas as defined in the ICT strategy (subprogramme 5: Global Services Division, including the Global Security and Architecture Section, which was previously managed and budgeted for under subprogramme 6, and the enterprise application centres in New York and Bangkok). The shift can be seen in document A/70/6 (Sect. 29E) as well as in the support account proposal for the 2017/18 financial year and the 2016 cost plan for the extrabudgetary resources The Administration suggests that the status of the recommendation be changed to "implemented"	and subsequent years				
A/67/651, para. 68	The Administration develop a fit-for-purpose governance framework to oversee the strategic development of ICT across the United Nations. This governance framework should clearly set out roles, accountabilities and responsibilities and ensure that decision-making bodies operate distinctly from consultative and advisory forums	The Secretary-General's bulletin has been finalized and will be issued in the course of 2017	The Board considers this recommendation to be under implementation. Governance structures have been revised and progress in implementing the recommendation has been made. However, the Board notes that the delegation of authority to the Chief Information Technology Officer is still pending		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
A/67/651, para. 76	Over time, the Administration redirect existing resources of the Office of Information and Communications Technology to more strategic activities and consider the use of alternative sourcing arrangements for day-to-day ICT support services	The 2016-2017 budget reflects a major shift in resource allocation. The 2018-2019 budget formulation is intended to achieve full visibility of the ICT requirements identified by offices and departments. The Office of Information and Communications Technology continues to coordinate requirements across the Secretariat for the following contracts: global Cisco agreement for network appliances, global checkpoint agreement for firewalls, global Microsoft agreement for the roll-out of Unite Mail (migration of the Lotus Notes fragmented systems into one United Nations email system based on Exchange/Office 365 Hybrid), global VMWare enterprise licence agreement contract for virtualization, global VMWare AirWatch contract for mobile device management, global Lenovo contract for end-user devices taking into account the evolution of end-user computing, global SITA contract for the provision of dynamic multipoint virtual private network and multiprotocol label switching connectivity, global Amazon Web Services contract for XaaS (anything as a service) and global Microsoft Azure contract for XaaS (anything as a service)	The Board notes the Administration's response and will monitor the development of the global sourcing strategy		X		
A/67/651, para. 82	Management develop an "intelligent client" function for Secretariat-wide ICT and within United Nations departments to effectively articulate business needs and provide a channel for the Office of	The business relationship management function is focused on understanding core business needs from across the Secretariat to enable the alignment of business and technology. During 2017-2019, this function will be the "intelligent client" function and will bring a business perspective to ICT	Progress in implementing this recommendation has been made through the establishment of the Business Relationship Management Section as an "intelligent client" function, as well as the establishment of other business-facing functions, such as regional technology centres. While these functions provide a channel for the		X		

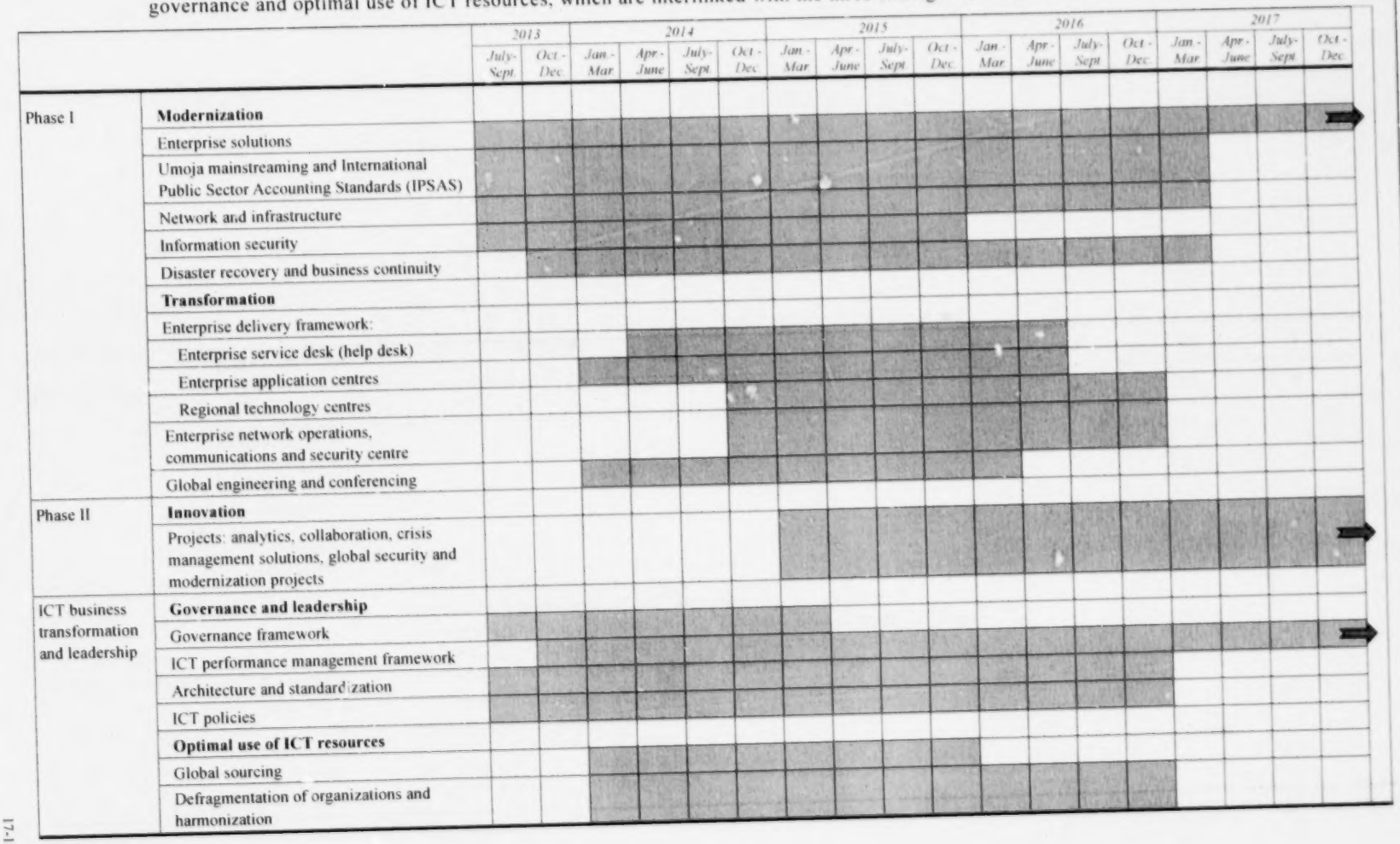
Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	Information and Communications Technology, local ICT committees and business areas to improve services		Office of Information and Communications Technology, they need to be fully embedded to enable an effective articulation of business needs. The recommendation remains under implementation				
A/67/651, para. 92	The Administration develop an application management strategy to minimize security risks and reduce costs. Such a strategy should address enterprise-wide applications primarily and include the decommissioning of legacy systems applications and services and any necessary data migration. As part of the new strategy regarding applications, the Administration should also develop a process to ensure that strategic ICT and operational investments can be made, no matter where they are undertaken in the Secretariat, and that they are consistent with Umoja and other enterprise applications	The application management strategy for the Secretariat (reference: APP.01.STG) was promulgated by the Chief Information Technology Officer on 27 March 2015 and is aimed at establishing a framework in which the Organization application development efforts are defragmented and standardized in line with best practices	The Board notes the Administration's response and considers that, even though progress has been made, the recommendation remains under implementation		X		
A/67/651, para. 100	Management strengthen Secretariat-wide ICT standards to consolidate and leverage ICT buying power, and use these standards to drive the harmonization of ICT	The Office of Central Support Services coordinates with the Office of Information and Communications Technology (OICT) all shopping carts for acquisitions and ICT services raised by non-OICT offices. OICT has an opportunity to review and clear requests submitted by other offices to	The Board notes the Administration's response and considers the recommendation to be under implementation		X		

Report reference	*Summary of recommendation*	*Administration's comments on status*	*Board's comments on status*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*
	as a necessary precursor to the consolidation of software applications and infrastructure	the Office of Central Support Services. The coordination of requirements for the 2018-2019 biennium will ensure better visibility of acquisitions by all departments in budgets and plans					
A/67/651, para. 101	The Administration agreed with the detailed recommendation on ICT security set out by the Board in its memorandum to the Chair of the Advisory Committee on Administrative and Budgetary Questions on this matter	The implementation of the action plan to strengthen information security in the areas of prevention, incident detection and response to security threats is ongoing (see A/70/364 and Corr.1)	The Board notes the Administration's response and considers the recommendation to be under implementation		X		
	Total			**2**	**21**	**0**	**0**
	Percentage			**9**	**91**	**0**	**0**

Annex II

Original strategic road map

Phases I and II cover the strategic information and communications technology (ICT) drivers of modernization, transformation and innovation. ICT business transformation and leadership cover the two major underlying areas of governance and optimal use of ICT resources, which are interlinked with the three strategic ICT drivers.



Annex III

Information and communications technology policies pending finalization and revision: 2017 road map

A. Three policies under review by the Information and Communications Technology Policy Committee

1. Policy on cloud computing (new technical procedure)
2. Minimum security requirements for public websites (revision of a technical procedure) (recently submitted)
3. Videoconferencing user etiquette (new information circular) (recently submitted)

B. Two policies submitted by the Information and Communications Technology Policy Committee but still with the Chief Information Technology Officer (policy development stage)

1. Mobile device use (technical procedure)
2. Mobile device use (administrative instruction)

C. Policies (administrative instructions) pending consultation of the Office of Information and Communications Technology or the Office of Human Resources Management

1. Remote access (administrative instruction), Office of the Under-Secretary-General
2. Telephony services (administrative instruction), Office of the Under-Secretary-General
3. E-mail services (administrative instruction), Office of the Under-Secretary-General

D. Policies due for revision

1. United Nations guidelines on the use of internal social media
2. Security incident response
3. Access control for the Secretariat
4. Intrusion detection
5. Remote access
6. Disaster recovery planning
7. Protection of United Nations assets from malicious software
8. Retention schedule for information and communications technology records
9. System monitoring and log management
10. Umoja data interfaces
11. Data centre access
12. Software installation
13. Cryptographic controls

17-11985

14. Software development
15. Videoconferencing
16. System configuration
17. Application decommissioning
18. Security consideration for videoconferencing

Annex IV

Status of application rationalization

Business owner	*Number of records in Unite Applications*	*Applications in use (production or sunset)*	*Retired or rationalized applications (as at 1 July 2014)*	*Applications maintained*	*Applications to be retired (obsolete applications)*	*Applications to be consolidated or modernized*
Department for General Assembly and Conference Management	97	67	30	29	2	36
Department of Economic and Social Affairs	31	15	16	12	0	3
Department of Field Support, Department of Peacekeeping Operations, Department of Political Affairs missions	694	350	344	71	2	277
Department of Management	12	8	4	3	0	5
Department of Political Affairs	73	64	9	1	2	61
Department of Public Information	37	31	6	17	3	11
Department of Safety and Security	73	71	2	21	3	47
Economic and Social Commission for Asia and the Pacific	64	31	33	5	2	24
Economic and Social Commission for Western Asia	46	28	18	6	0	22
Economic Commission for Africa	113	67	46	14	0	53
Economic Commission for Europe	21	17	4	12	0	5
Economic Commission for Latin America and the Caribbean	87	70	17	29	2	39
Executive Office of the Secretary-General of the United Nations	22	18	4	2	1	15
Inter-Agency Secretariat of the International Strategy for Disaster Reduction	5	5	0	5	0	0
International Criminal Tribunal for Rwanda	63	0	63	0	0	0
International Tribunal for the Former Yugoslavia	60	51	9	22	2	27
Office for Disarmament Affairs	37	30	7	4	1	25
Office for the Coordination of Humanitarian Affairs	31	18	13	8	0	10
Office of Central Support Services	74	59	15	30	0	29
Office of Human Resources Management	38	17	21	6	0	11
Office of Information and Communications Technology	64	47	17	24	7	16
Office of Internal Oversight Services	24	16	8	7	2	7
Office of Legal Affairs	11	9	2	1	0	8
Office of Programme, Planning, Budget and Accounts	55	28	27	9	0	19
Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States	1	1	0	0	0	1
Office of the United Nations High Commissioner for Human Rights	45	36	9	23	1	12

Business owner	*Number of records in Unite Applications*	*Applications in use (production or sunset)*	*Retired or rationalized applications (as at 1 July 2016)*	*Applications maintained*	*Applications to be retired (obsolete applications)*	*Applications to be consolidated or modernized*
United Nations Conference on Trade and Development	4	3	1	2	0	1
United Nations Environment Programme	11	8	3	6	0	2
United Nations Human Settlements Programme (UN-Habitat)	4	4	0	3	0	1
United Nations Office at Geneva	86	49	37	14	0	35
United Nations Office at Nairobi	107	58	49	7	1	50
United Nations Office at Vienna and United Nations Office on Drugs and Crime	326	197	129	67	5	125
Total	**2 416**	**1 473**	**943**	**460**	**36**	**977**

Annex V

Results of the survey on the implementation of the information and communications technology strategy

I. Objectives of the survey

The audit team sought to assess user perception of the quality and usefulness of the information and communications technology (ICT) services and products implemented to improve organizational efficiency, across the Secretariat. Hence, a user satisfaction survey was conducted with the help of the Office of Information and Communications Technology. The survey was originally scheduled from 30 January to 6 February 2017 but was later extended until 12 February 2017.

II. Brief of the survey

The survey comprised 10 questions, each being subdivided into further questions. The intent of the survey was to assess the level of awareness about the ICT strategy and the level of satisfaction against each ICT service. Users were asked to rate their satisfaction level on a scale of 0 to 5, i.e. from "least satisfied" (1) to "most satisfied" (5), with 0 meaning "not aware".

III. Respondent numbers

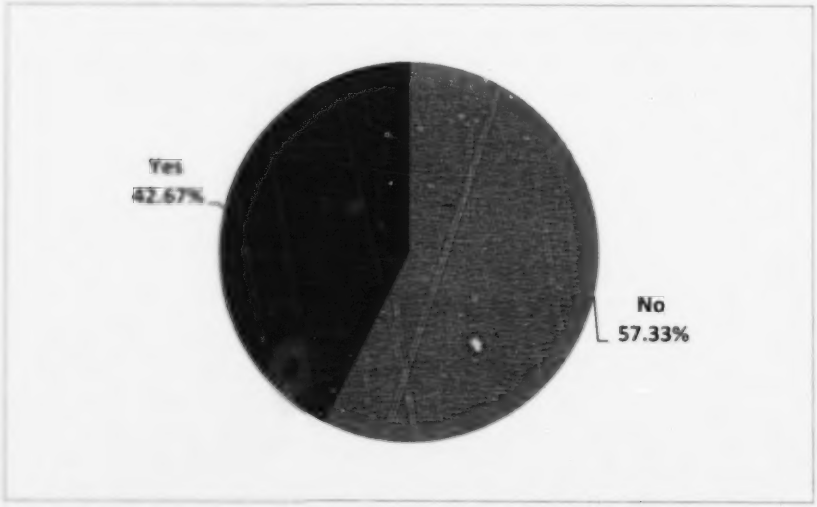
While 6,753 users took part in the survey, only the 2,979 complete responses received by 6 February 2017 have been considered for the purpose of the present analysis.

IV. Results of the survey

1. Are you aware of the revised ICT strategy of 2014 implemented at the United Nations?

Around 57 per cent of respondents were not aware of the ICT strategy.

Overall awareness of the ICT strategy of 2014

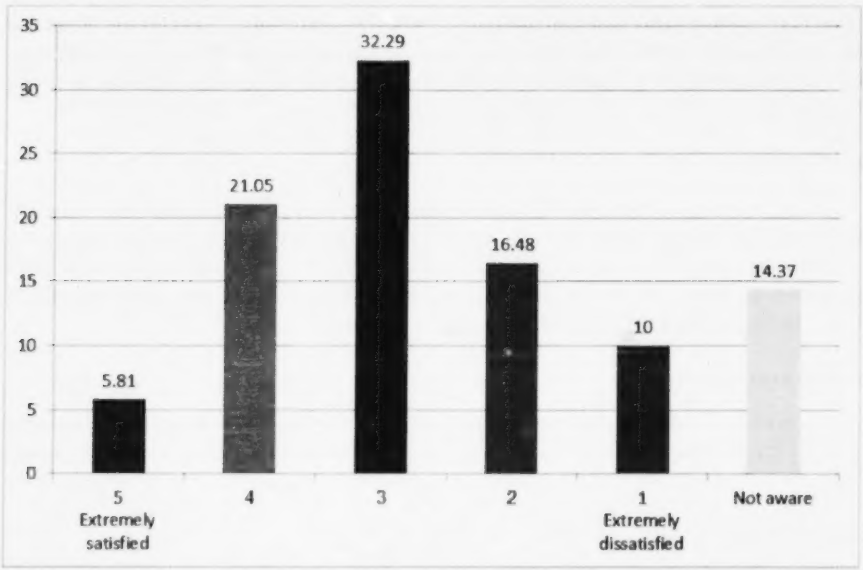


2. How would you rate the level of satisfaction with respect to the ICT applications, services and support provided?

A total of 26 per cent of respondents expressed dissatisfaction and 32 per cent were indifferent.

Overall satisfaction: ICT services, applications and support

(in percentage)

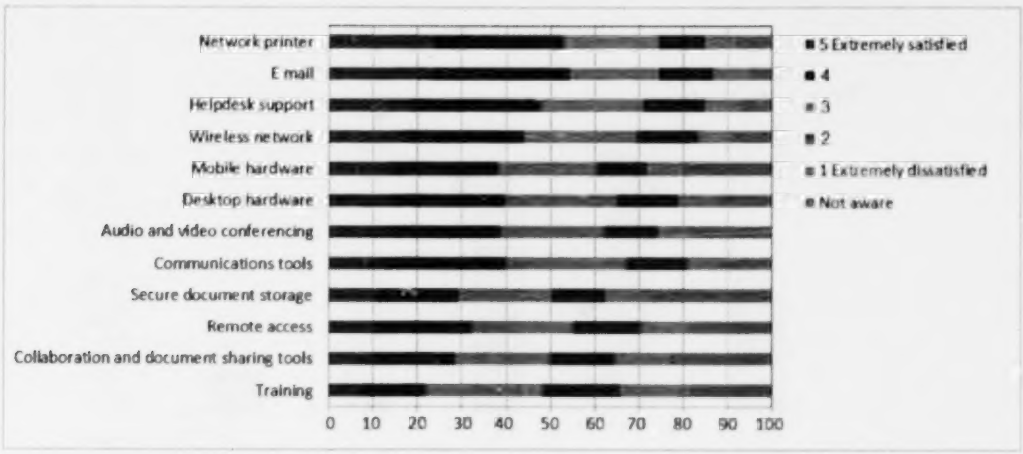


3. What is your satisfaction level about the quality of ICT services (email, communication tools, help desk support, wireless network, remote access, mobile hardware, desktop hardware, network printer, audioconferencing and videoconferencing, training, secure document storage, collaboration and document-sharing tools)?

More than 60 per cent of the respondents rated their satisfaction levels at 3 or below, with the exception of email and network printer. The lowest satisfaction levels are noticed against training, collaboration and document sharing-tool, and remote access.

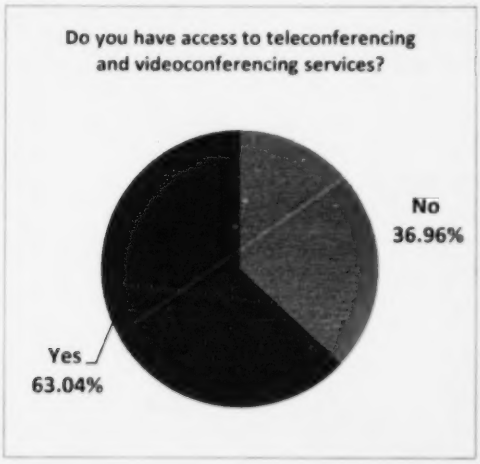
ICT services: overall satisfaction

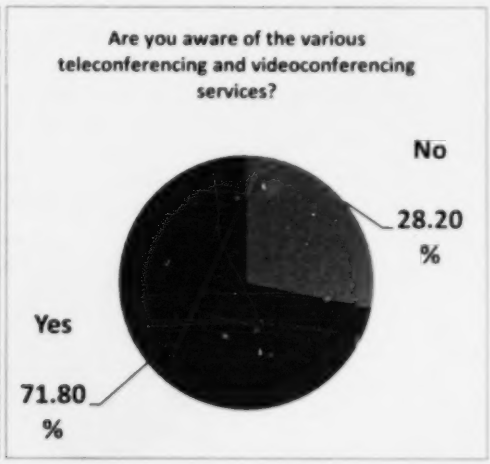
(in percentage)



4. Teleconferencing and videoconferencing services

Around 72 per cent of the respondents were aware of the various teleconferencing and videoconferencing services, and 63 per cent had access to them.



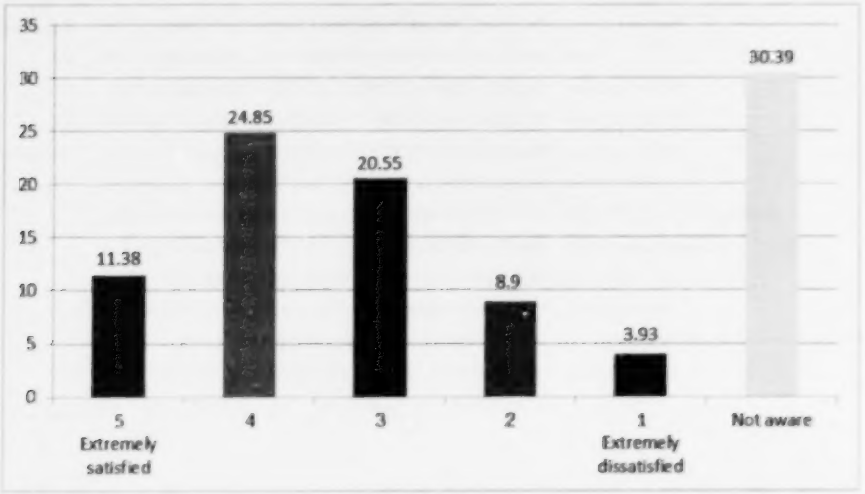


Subquestion c: if you are aware of teleconferencing and videoconferencing services and have access to them, how would you rate the quality of such services?

A total of 30 per cent of the respondents were not aware of the quality of teleconferencing and videoconferencing services. Around 33 per cent displayed satisfaction levels of 3 or below.

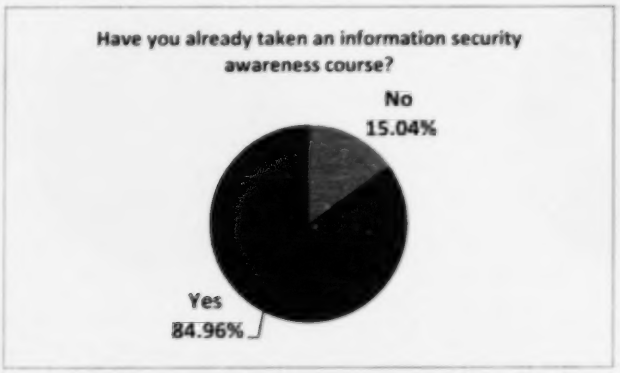
Quality of teleconferencing and videoconferencing services

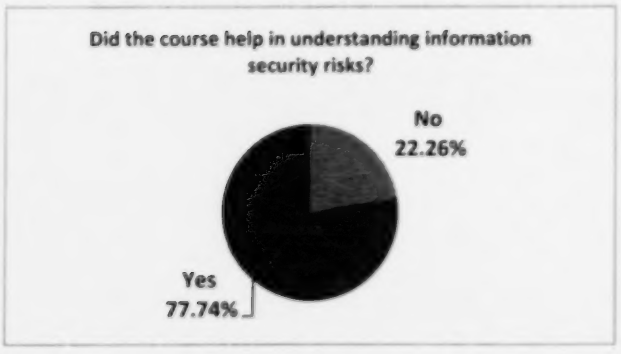
(in percentage)



5. Information security

Regarding the training on information security courses, it is observed that around 15 per cent of the respondents had not yet been trained. Furthermore, when asked whether they felt that the courses adequately enhanced their understanding of the risks and of how to protect themselves and the Organization, 22 per cent of the respondents answered in the negative.



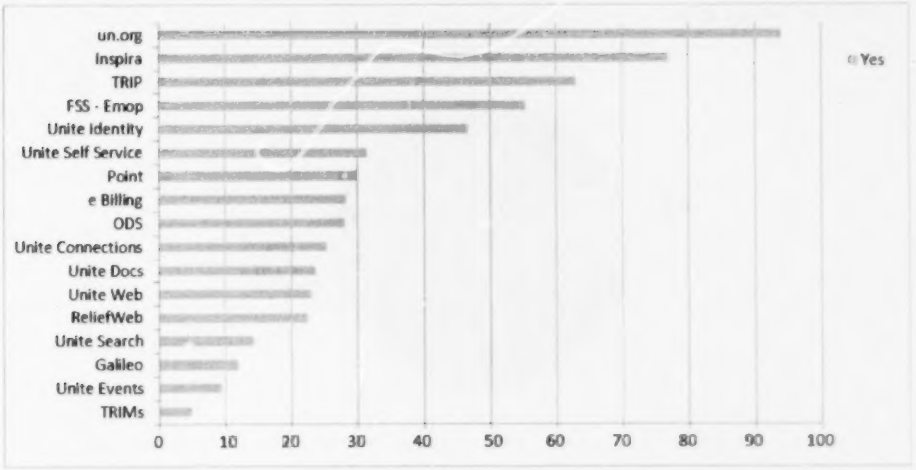


6. Do you use the following ICT enterprise applications frequently?

Around 70 per cent of the respondents were not frequently using applications such as Unite Connections, Unite Docs, Unite Web, Unite Search or Unite Events. Between 60 and 95 per cent of the respondents used such applications as Inspira or Unite Identity or the "un.org" website. Only 55 per cent of the respondents were frequently accessing Unite Self Service.

Use of enterprise applications: yes / no

(in percentage)

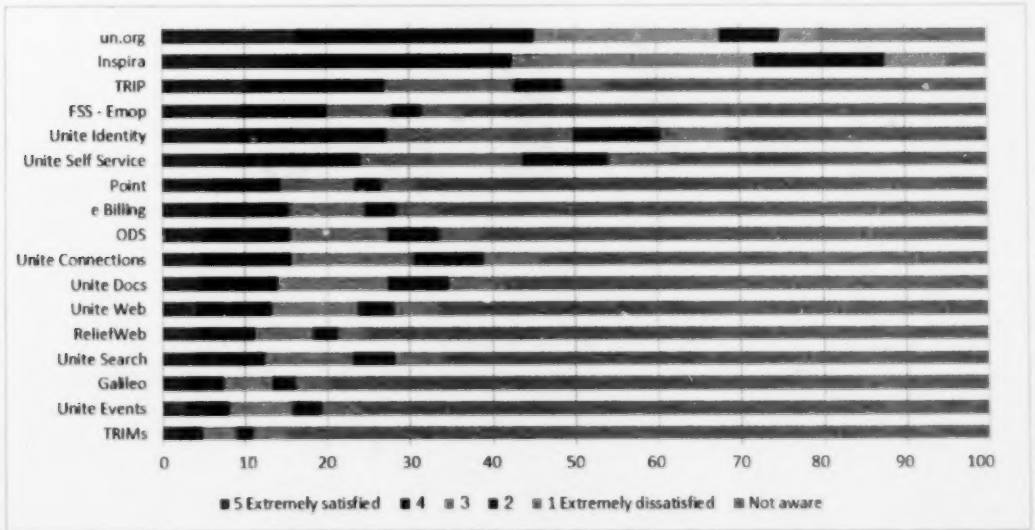


7. Rate your satisfaction levels with the ICT enterprise applications.

Around 70 per cent of the respondents were not aware of many of the applications, including Unite applications.

Enterprise applications: satisfaction levels

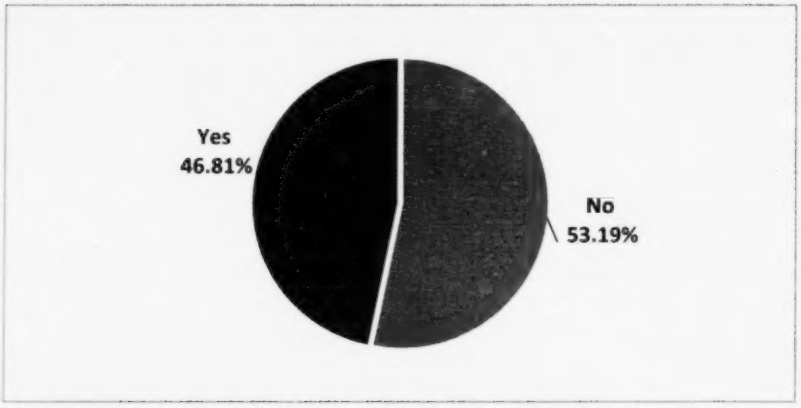
(in percentage)



ICT training

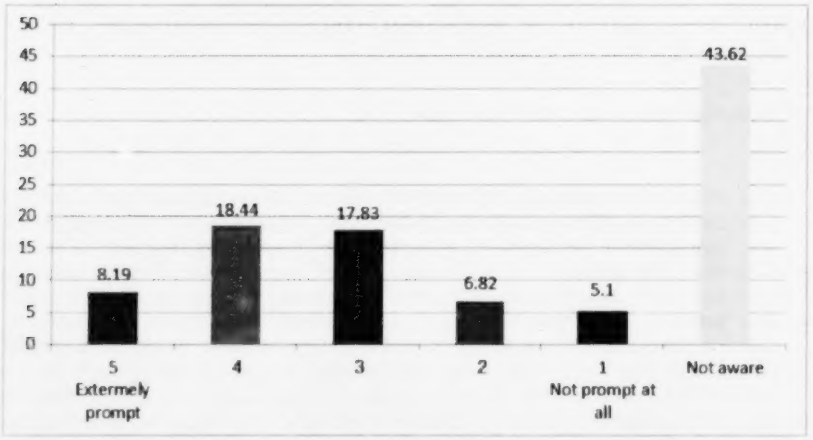
A total of 53 per cent of the respondents stated that they had not been given the necessary training in ICT for their current assignment. They also stated that the level of usefulness of the training imparted was only moderate. Around 44 per cent responded that they were not aware of the usefulness of ICT training. Around 26 per cent rated ICT training as useful and 18 per cent gave average ratings with respect to its usefulness. Around 12 per cent found the training not useful.

Have you been provided with the ICT training necessary for your current assignment?



Usefulness of ICT training

(in percentage)

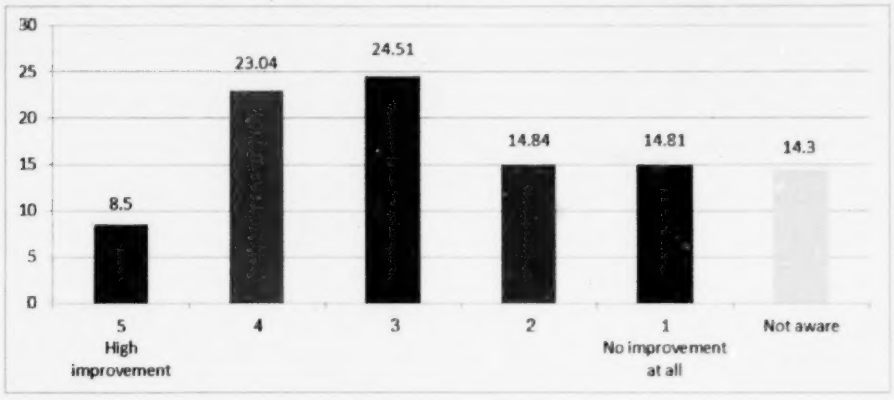


8. In the last two years, has ICT improved your work efficiency?

Around 15 per cent of the respondents said that ICT had not improved their work efficiency at all. Only 32 per cent of the respondents expressed improvement in work efficiency.

ICT impact on work efficiency

(in percentage)



9. Rate the promptness of Unite Service Desk.

Around 46 per cent of the respondents rated the promptness of the Unite Service Desk at levels 3 or below. Around 38 per cent rated it as prompt, and around 16 per cent mentioned that they were not aware of the promptness of the Service Desk.